

Office Action Summary	Application No.	Applicant(s)	
	09/927,586	THOMAS ET AL.	
	Examiner	Art Unit	
	Jeff H. Aftergut	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 02 October 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-15 and 21-25 is/are pending in the application.

4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 12-15 and 21-25 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,586	08/10/2001	Christopher Scott Thomas	1949.PKG	5440
7590	11/19/2003		EXAMINER	
Cynthia L. Foulke National Starch and Chemical Company 10 Finderne Avenue Bridgewater, NJ 08807				AFTERGUT, JEFF H
		ART UNIT	PAPER NUMBER	1733

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 12-15 and 21-25 is acknowledged. The traversal is on the ground(s) that the product must as claimed be made by the specified manipulative steps and thus there is no additional burden placed upon the examiner. This is not found persuasive because the product as claimed could be manufactured wherein the heating of the adhesive was via microwave heating rather than radio frequency heating. The Applicant is advised that additionally, no heating at all need be provided to heat the paperboard tube of the product to have the identical product (i.e. regular evaporation of the aqueous adhesive would render the same product). Applicant is advised that there is an additional search burden associated with having both the method and article of manufacture in the same application. For example the article of manufacture would be found in class 206 or class 428 while the method of manufacturing the tube would be found in class 156 or 493. Clearly, there is also an additional examination burden associated with having both the method and article of manufacture in the same application as there are different considerations given to article claims from method claims (i.e. the manipulative steps used to make the article are irrelevant to the patentability of the same unless applicant can show that the manipulative steps produced a materially different product while in the method the manipulative steps and material worked upon are given patentable weight without such proofs).

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-11 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking

claim. Applicant timely traversed the restriction (election) requirement in the response dated 10-2-03.

Claim Rejections - 35 USC § 102/103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (c) he has abandoned the invention.
- (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- (f) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

(f) he did not himself invent the subject matter sought to be patented.

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12-15, 21, 22, 24, and 25 are rejected under 35 U.S.C. 102 as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the admitted prior art.

The admitted prior art on page 1 of the specification stated that paper tubes for use as winding cores, composite cans or tubes for packaged goods, concrete forms, etc. were generally formed from two or more plies of paper fed in either sheet or web form, adhesive is applied to the same between the plies, and the adhesive coated material is wound about a stationary mandrel. The paper webs or sheets are wound about the mandrel to form the paper tubes which are pulled off the mandrel with feeding and compression belts and the wound tubes are cut downstream of the mandrel. The admitted prior art additionally expressed that a rate-limiting step in the manufacturing operation was the adhesive which in North America is almost exclusively "waterborne adhesives". The admitted prior art therefore admitted that it was known to have a tube formed from either single or multiple plies of paperboard or paper wherein the paper or paperboard materials were secured together with a water based adhesive material. the

admitted prior art suggested that at slower production speeds it was known to set the adhesive with various heating mechanisms which included hot air, heater elements, hot presses, heat lamps, infrared heaters, or microwave heaters. Clearly, the resulting product at slower production rates would have been identical to the product manufactured by applicant. The product as recited merely requires that the tube have a water-based adhesive joining the plies together in a tube form. the radio frequency heating was provided merely to dry the adhesive and does not materially effect the final product produced. There is no evidence that a different product would result from the radio frequency drying of the material as the drying was merely driving off the water of the plies. Applicant is advised that where, as here, it cannot be discerned how the manipulative steps would have produced a materially different product, it is the applicant who has the burden to show that the manipulative steps would have produced a materially different end product. additionally, it is deemed appropriate for the Office to make a rejection based upon 102/103 as the Office is not equipped to make the many different products by the various processes put before it and make physical comparisons between the products to determine whether they are different or not. It would have been obvious to manipulate the removal of water from the adhesive material in the admitted prior art to produce a consumer accepted container or tube which was unwarped and which was undamaged due to excessive heating and/or the manner in which the water was removed from the binder (note that microwave heating would have directed the heat directly to the water based adhesive if the same had susceptor particles therein and thus the paper plies would not have been damaged in the manner described by applicant in the prior art drying operation in high speed manufacture). Additionally, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to operate the equipment at slower speeds to produce a materially useful end product.

Regarding claim 13, the applicant admitted that two or more plies would have been wound to make the tube. regarding claims 14 and 15, the applicant has admitted that the tubes were known for packaging goods as well as for concrete forms. It is not seen how what the tube was used for materially effected the end product. the end product (whether food was contained in the tube or not) would have been the same. regarding claim 21. the applicant suggested the material was wound on a stationary mandrel and that adhesive was applied upon the same during the winding operation for forming the tube. the claim recites that the tube was passed through a radio frequency field, however as expressed above such is a manipulative step in the operation and is given no weight as no evidence has been supplied which suggested that the radio frequency heating to dry produced a materially different end product. regarding claim 22, there are only two known ways to wind, helically and convolutedly and one skilled in the art would have readily appreciated the same. Additionally the pulling of the material off the mandrel with the belts would have been understood to have been an operation performed when one helically wound to form the containers and/or tubes (note applicant admitted the use of belts to pull the material from the mandrel). Regarding claims 24 and 25, see the discussions above regarding the specific use of the product as it related to claims 14 and 15 as well as the admitted prior art which stated that the tubes would have been useful for concrete forms (industrial uses) as well as for packaged goods (consumer usage).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Lennon et al.

The applicant is referred to paragraph 5 above for a complete discussion of the admitted prior art. The admitted prior art did suggest that one skilled in the art would have employed a belt to pull the paperboard off of the stationary mandrel in the winding operation, however it never expressly stated that such would have been performed in a helical winding operation. Additionally, the reference to the admitted prior art did not expressly state that one skilled in the art would have formed paperboard tubes from a single ply of paperboard material. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the tube from a single ply of paper material in order to provide a tube which was less expensive for consumer products which were subsequently wasted (like a toilet tissue tube which is disposed of by the consumer after use) as evidenced by Lennon et al, see column 1, lines 47-59, column 3, lines 45-67, for example. It should be noted that in Lennon the tubes were formed by helically winding with a belt to pull the tube from the mandrel. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a single walled paperboard tube in order to reduce the costs associated with the same in the manufacture of

consumer goods which were disposable as suggested by Lennon et al in the manufacture of paperboard containers of the admitted prior art.

8. Claims 12-15, 21, 22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Drenning et al.

The admitted prior art is discussed above in detail in paragraph 5 and applicant is referred to the same for a complete discussion of the same. the admitted prior art additionally stated that the known heating mechanisms used to dry the water based adhesive which operated at high speed had several problems including the need to heat the paperboard material in order to heat the adhesive. This resulted in a variance in the moisture content of the paperboard as well as possible damaging to the paperboard itself. Applicant additionally stated that heating in this manner was not highly efficient.

Drenning et al, in a process of making a paperboard product (corrugated cardboard) suggested that it was known at the time the invention was made to employ an aqueous based adhesive binder material (starch) to join two layers of the paperboard material together. The reference suggested that instead of employing a heating mechanism which heated the paper material (which would have resulted in the removal of moisture from the paper in an uneven manner and later resulted in warpage of the finished assembly because of the equilibrating of the moisture after binding as well as possible damage to the paper material itself from the high heat necessary to operate a high speed) it was known at the time the invention was made to employ radio frequency heating (dielectric heating) of the adhesive directly to join the materials together where the water was removed via the dielectric heating. The applicant is more specifically referred to column 1, line 26-column 2, line 26, column 2, lines 39-column 3, line 42, column 4,

line 43-column 5, line 38, column 6, lines 41-column 7, line 18 (in particular lines 63, 68-71 of column 6 and lines 11-15 of column 7) and column 8, lines 22-41 and in particular lines 29-32. Because it would have facilitated the formation of a bond in paperboard with a water based adhesive by drying the adhesive in a manner which did not adversely effect the paper (to warp the same or to damage the paper itself) as suggested by Drenning et al in the wound paperboard containers of the admitted prior art where the paperboard was glued with a water based adhesive wherein the adhesive was dried.

For a discussion of the dependent claims, the applicant is referred to paragraph 5 above.

9. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 8 further taken with Lennon et al.

The applicant is referred to paragraph 8 above for a complete discussion of the admitted prior art and Drenning et al (wherein one skilled in the art would have applied rf heating to dry the adhesive in the paperboard tubes of the admitted prior art). The admitted prior art did suggest that one skilled in the art would have employed a belt to pull the paperboard off of the stationary mandrel in the winding operation, however it never expressly stated that such would have been performed in a helical winding operation. Additionally, the reference to the admitted prior art did not expressly state that one skilled in the art would have formed the paperboard tubes from a single ply of paperboard material. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the tube from a single ply of paper material in order to provide a tube which was less expensive for consumer products which were subsequently wasted (like a toilet tissue tube which is disposed of by the consumer after use) as evidenced by Lennon et al, see column 1, lines 47-59, column 3, lines 45-67, for example. It

should be noted that in Lennon the tubes were formed by helically winding with a belt to pull the tube from the mandrel. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a single walled paperboard tube in order to reduce the costs associated with the same in the manufacture of consumer goods which were disposable as suggested by Lennon et al in the manufacture of paperboard containers as set forth above in paragraph 8 in order to reduce the manufacturing costs of disposable paperboard tubes.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. After December 18, 2003, the examiner can be reached at 571-272-1212. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
November 14, 2003